

Title: HI Absorption in Merger Remnants

Abstract:

It has been proposed that ultraluminous infrared galaxies (ULIRGs) pass through a luminous starburst phase, followed by a dust-enshrouded AGN phase, and finally evolve into optically bright "naked" quasars once they shed their gas/dust reservoirs through powerful wind events. We present the results of our recent 21-cm HI survey of 21 merger remnants with the Green Bank Telescope. These remnants were selected from the QUEST (Quasar/ULIRG Evolution Study) sample of ULIRGs and PG quasars; our targets are all bolometrically dominated by AGN and sample all phases of the proposed ULIRG $\rightarrow$ IR-excess quasar $\rightarrow$ optical quasar sequence. We explore whether there is an evolutionary connection between ULIRGs and quasars by looking for the occurrence of HI absorption tracing neutral gas outflows; our results will allow us to identify where along the sequence the majority of a merger's gas reservoir is expelled.